WHAT IS CLAIMED IS:

1. A stiffened dilating balloon comprising:

an expandable balloon including a plurality of longitudinally discontinuous stiffening members disposed along a perimeter of said balloon;

wherein said balloon is made of a flexible material;

wherein the stiffening members are less flexible than said balloon; and

wherein each stiffening member affects a configuration of an area of said perimeter.

2. The balloon of claim 1 wherein the stiffening members are longitudinally aligned.

3. The balloon of claim 1 wherein the stiffening members are arranged at said perimeter in a staggered configuration.

4. The balloon of claim 3 wherein the stiffening members are arranged in a grid pattern.

5. The balloon of claim 1 wherein at least one of the stiffening members overlaps another one of the stiffening members.

6. The balloon of claim 1 wherein at least one of the stiffening members interdigitates with another one of the stiffening members.

7. The balloon of claim 1 wherein at least one of the stiffening members is connected to another one of the stiffening members by a filament.

8. The balloon of claim 1 wherein the stiffening members have a geometric shape.

9. The balloon of claim 1 wherein the stiffening members have a curved cross-section.

10. The balloon of claim 1 wherein the stiffening members have a polygonal cross-section.

11. The balloon of claim 1 wherein the stiffening members include raised surfaces.

12. The balloon of claim 11 wherein the raised surfaces are substantially smooth.

13. The balloon of claim 11 wherein the raised surfaces are substantially pointed.

14. The balloon of claim 11 wherein the raised surfaces are sufficiently sharp to pierce an occlusion.

15. The balloon of claim 11 wherein the raised surfaces have a saw-tooth configuration.

16. The balloon of claim 1 wherein the stiffening members are disposed along the perimeter of only a central section of said balloon.

17. The balloon of claim 1 wherein at least one of the stiffening members comprises means for engaging an occlusion in a lumen.

18. The balloon of claim 1 wherein at least one of the stiffening members comprises means for piercing an occlusion in a lumen.

19. The balloon of claim 1 wherein at least one of the stiffening members comprises means for temporarily retaining a stent.

20. The balloon of claim 1 wherein at least one of the stiffening members comprises means for temporarily retaining a stent-graft.

21. The balloon of claim 1 wherein at least one of the stiffening members is located within said balloon abutting an inner surface of said balloon.

22. The balloon of claim 1 wherein at least a portion of one of the stiffening members is radio-opaque.

23. The balloon of claim 1 wherein the stiffening members are disposed on a sheet of material adapted to be applied to said balloon.

24. A stiffened balloon comprising:

an expandable balloon including a plurality of longitudinally continuous stiffening members disposed along a perimeter of said balloon;

wherein said balloon is made of a flexible material;

wherein the stiffening members are less flexible than said balloon;

wherein each stiffening member affects a configuration of an area of said perimeter; and

wherein at least one of the stiffening members includes a projection adapted to temporarily retain a device at said balloon.

25. The balloon of claim 24 wherein said device is a stent.

26. The balloon of claim 24 wherein said device is a stent-graft.

27. The balloon of claim 24 wherein at least one of the stiffening members is adapted to interdigitate with a device to temporarily retain said device at said balloon.

28. The balloon of claim 27 wherein said device is a stent.

29. The balloon of claim 28 wherein said stent includes at least one of an opening and an interface complementary to at least one of the projections.

30. The balloon of claim 27 wherein said device is a stent-graft.

31. The balloon of claim 30 wherein said stent-graft includes at least one of an opening and an interface complementary to at least one of the projections.

32. The balloon of claim 24 wherein at least one of the stiffening members is radio-opaque.

33. A stiffened balloon comprising:

an expandable balloon including a plurality of longitudinally continuous stiffening members disposed along a perimeter of said balloon;

wherein said balloon is made of a flexible material;

wherein the stiffening members are less flexible than said balloon;

wherein each stiffening member affects a configuration of an area of said perimeter; and

wherein at least one of the stiffening members includes a raised surface.

34. The balloon of claim 33 wherein the raised surfaces are substantially pointed.

35. The balloon of claim 33 wherein the raised surfaces are sufficiently sharp to pierce an occlusion.

36. The balloon of claim 33 wherein the raised surfaces have a saw-tooth configuration.

37. The balloon of claim 33 wherein the stiffening members are disposed along the perimeter of only a central section of said balloon.

38. The balloon of claim 33 wherein at least one of the stiffening members comprises means for engaging an occlusion in a lumen.

39. The balloon of claim 33 wherein at least one of the stiffening members comprises means for piercing an occlusion in a lumen.

40. The balloon of claim 33 wherein the stiffening members are disposed on a sheet of material adapted to be applied to said balloon.

41. A method of using a stiffened balloon to dilate a lumen and deploy an expandable device comprising the steps of:

introducing into a lumen a stiffened balloon bearing an expandable device;

expanding said balloon and said device to cause at least one projection on a stiffener of said balloon to protrude above an outer surface of said stent and engage an inner surface of the lumen;

dilating the lumen; and

deploying said device in the lumen.

42. The method of claim 41 further comprising the step of piercing an occlusion in the lumen with a projection.

43. The method of claim 41 wherein the lumen is an artery.

44. A method of using a stiffened balloon to dilate a lumen and deploy an expandable device comprising the steps of:

interdigitating at least one projection on a stiffener of a stiffened balloon with an expandable device;

introducing into a lumen said stiffened balloon bearing said device;

expanding said balloon and said device;

dilating the lumen; and

deploying said device in the lumen.

45. A stiffened balloon comprising:

an expandable balloon including a plurality of longitudinally continuous stiffening members disposed along a perimeter of said balloon;

wherein said balloon is made of a flexible material;

wherein the stiffening members are less flexible than said balloon;

wherein each stiffening member affects a configuration of an area of said perimeter; and

wherein at least one of the stiffening members includes a pivot point where the stiffening member may be bent to facilitate navigation of the balloon through a passage.

46. A method of reconfiguring a portion of an expandable device deployed at a lumen comprising the steps of:

introducing into the lumen a stiffened balloon bearing a longitudinal stiffener at a first location on the balloon;

aligning said longitudinal stiffener with the portion of the expandable device; and

expanding said balloon to cause said stiffener to exert a first radial force against the portion of the expandable device to reconfigure the portion;

wherein said first radial force is greater than a radial force applied by said balloon at any other location on the balloon.

47. The method of claim 46 wherein said step of aligning comprises the steps of:

determining an orientation of said longitudinal stiffener with reference to a radio-opaque portion of the stiffener; and

modifying the orientation of said longitudinal stiffener to align with the portion of the expandable device.